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Cost Mesa, CA 92626  
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January 5, 2004

Mr. Roger Baker  
City Planner  
CITY OF BURBANK  
275 East Olive Avenue  
Burbank, California 91502

Clayton Project No. 80-98191.01

Subject: Status Report of Vapor Extraction System Operation – Lockheed-Martin  
B-1 Site – February 5, 2003 through August 25, 2003

Dear Mr. Baker:

Clayton Group Services, Inc. (Clayton) has prepared the following status report for the Vapor Extraction System (VES) operation at the Lockheed-Martin B-1 Site for the period between February 5, 2003 through August 25, 2003. It includes the following items:

- Background
- Clayton Field Activities
- Results of Laboratory Analysis
- Health Risk Assessment Calculations
- Conclusions

## **BACKGROUND**

Alton Geoscience (Alton) conducted a Phase I, a Phase II, a Phase III, and a Phase IV assessment of VES effluent sampling in addition to a health risk assessment for the Lockheed-Martin B-1 facility. Phase I consisted of twelve weekly health risk reports based on samples collected between September 2, 1997 and February 9, 1998. Phase II included twelve bi-weekly health risk assessments based on samples collected between February 16, 1998 and September 9, 1998. Phase III consisted of monthly sampling between October and December 1998.

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Phase IV of the VES effluent sampling consists of VES effluent sample acquisition, laboratory analyses, and health risk assessments to be performed once per quarter for the remainder of the project. The first and second quarterly health risk assessments were provided by Alton in reports dated January 18, 1999 and May 24, 1999, respectively.

Clayton subsequently has conducted quarterly sampling of the units and has routinely reported the results. These reports were issued as follows:

- November 23, 1999, which addressed the temporary shutdown of the system on October 14, 1999 for rebound testing;
- March 13, 2000, for the period following restart of the system;
- May 16, 2000, for the period through March 2000;
- July 12, 2000, for the period through June 2000;
- November 17, 2000, for the period through September 2000;
- February 22, 2001, for the period through January 2001;
- May 31, 2001, for the period through April 2001;
- August 21, 2001, for the period through August 5, 2001;
- November 12, 2001, for the period through October 19, 2001;
- March 29, 2002, for the period through January 28, 2002;
- June 6, 2002, for the period through April 29, 2002;
- August 23, 2002, for the period through July 26, 2002;
- January 8, 2003, for the period through October 30, 2002; and,
- March 4, 2003, for the period through February 5, 2003.

Subsequent to collecting the sample, the VES was shut down for rebound testing and was not restarted until August 19, 2003. After startup, Clayton personnel were notified and a sample was collected on August 25, 2003.

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### **CLAYTON FIELD ACTIVITIES**

On August 25, 2003, Clayton personnel met with Earth Tech personnel to conduct sampling of air emissions at the Lockheed-Martin B-1 Site VES. Clayton and Earth Tech personnel each collected an exhaust sample using an evacuated Summa canister, connected via a disposable Teflon<sup>®</sup> tube to the VES unit's sampling port.

During the sampling period, the exhaust flow rate was 1,584 standard cubic feet per minute. The two stack analyzers monitoring volatile organic compound (VOC) concentrations showed reasonable correlation with readings of 0.40 and 0.67 parts per million. The VOC emission rate readings were within acceptable operating conditions for the VES. The 15-minute average VOC emission rate indicated at that time was 0.7200 pounds per day (lbs/day), while the 24-hour average was 0.7926 lbs/day. These values were approximately 60% of the calculated value of 1.343 lbs/day, based on the analytical data.

The sample collected by Clayton was delivered to Air Toxics Ltd. in Folsom, California, under chain of custody control for analysis by gas-chromatograph/mass spectrometry (GC/MS), in accordance with Environmental Protection Agency Method TO-15.

### **RESULTS OF LABORATORY ANALYSIS**

The results from the TO-15 analysis of the sample taken on August 25, 2003 indicated that eight compounds were present in concentrations above laboratory detection limits. Following are a list of these compounds and the concentrations indicated by the analysis:

<b>Compound</b>	<b>Concentration (ppmv)*</b>
1,1-Dichloroethene	0.013
Freon 113 (1,1,2-Trichloro- 1,2,2-trifluoro- ethane)	0.014
Cis-1,2-Dichloroethene	0.0035
Chloroform	0.0034
1,1,1-Trichloroethane	0.0055
Trichloroethene	0.750
Toluene	0.005
Tetrachloroethene (Perchloroethylene or PCE))	0.740

\* ppmv = parts per million by volume

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These results reflect a 47% increase in the total VOC concentration from the last sampling event, but show a decrease in the number of constituents detected. The total VOC concentration has increased to a two-year high and is at a high level relative to the historical trend.

Using the analytical data, an overall VOC emission rate of 1.343 lbs/day was calculated. This figure is 41% higher than the 24-hour average VOC reading and 47% higher than the 15-minute average VOC reading, both of which were provided by the organic vapor monitoring system. However, the calculated VOC emission levels are well below the Conditional Use Permit (CUP) limit of 9.8 lbs/day. These results, along with the previously calculated total VOC emissions for the unit, are plotted on Figure 1. Vinyl chloride was not detected in the sample taken. Therefore, its CUP limit of 0.14 lbs/day was not exceeded.

### **HEALTH RISK ASSESSMENT CALCULATIONS**

In accordance with the CUP, the stack concentrations of each constituent and the exhaust flow rates were used to calculate the excess cancer risk resulting from operation of the VES. The first risk calculation was used to determine the risk if the unit was operated for a lifetime period of 70 years, evaluating the risk to both workers and local residents for those chemicals specified in the South Coast Air Quality Management District Rule 1401, as adopted at the time the unit was permitted. The second risk calculation was used to determine the risk to both workers and local residents for the life of the project (the 8.5-year operating period), for all detected chemicals for which carcinogenic risk factors are available.

The resulting cancer risk calculations for both conditions indicated an acceptable Maximum Individual Cancer Risk (MICR) significantly less than one in one million. The results from these calculations, along with the MICR results from previous calculations for the unit, are presented on Figures 2 and 3, for 70-year and 8.5-year calculations, respectively.

### **CONCLUSIONS**

Based on the results of the information gathered and samples taken on February 3, 2003, the following conclusions can be made:

- The current result of 1.343 lbs/day is evidence that rebound has occurred. Although the overall VOC emission rate has not been this comparable since August of 2001, it remains well below the CUP limit of 9.8 lbs/day. Evidently, the residual contaminants remaining in the subsurface are higher than previously expected, resulting in additional VES operation.

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- Since vinyl chloride was not detected, its CUP limit of 0.14 lbs/day was not exceeded. Excess cancer risks (MICR) were less than one in one million for workers and local residents, using both 70-year lifetime and 8.5-year operating period risk calculations.

If you have any questions or require additional information regarding this status report, please contact me at (714) 431-4157.

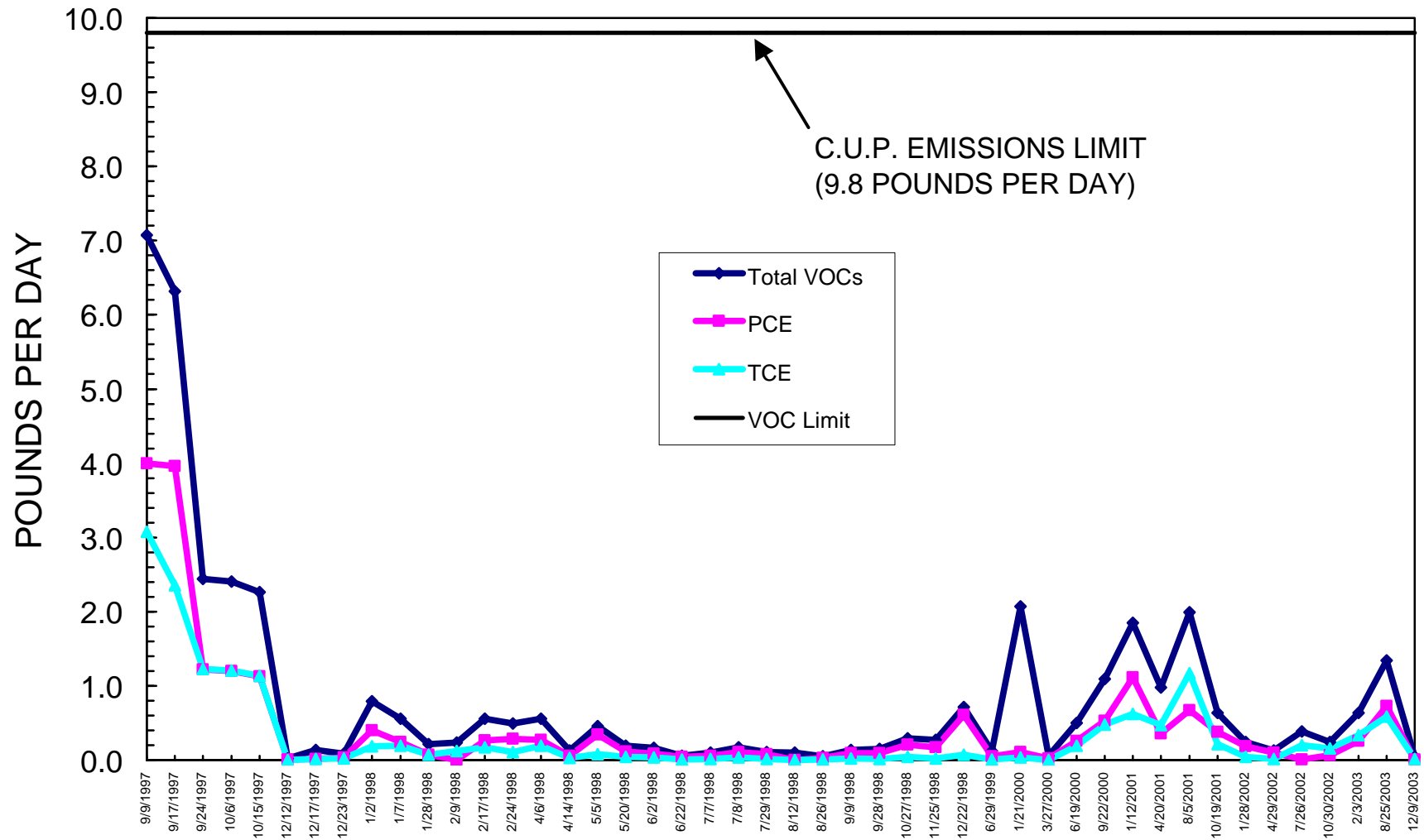
Sincerely,

Martin L. McClintock, P.E. No. 5025  
Project Engineer  
Environmental Services

Attachments: Figure 1 - Daily VOC Emissions  
Figure 2 - Human Health Risk (70 Year Lifetime)  
Figure 3 - Human Health Risk (8.5 Year Operating Period)  
Laboratory Report

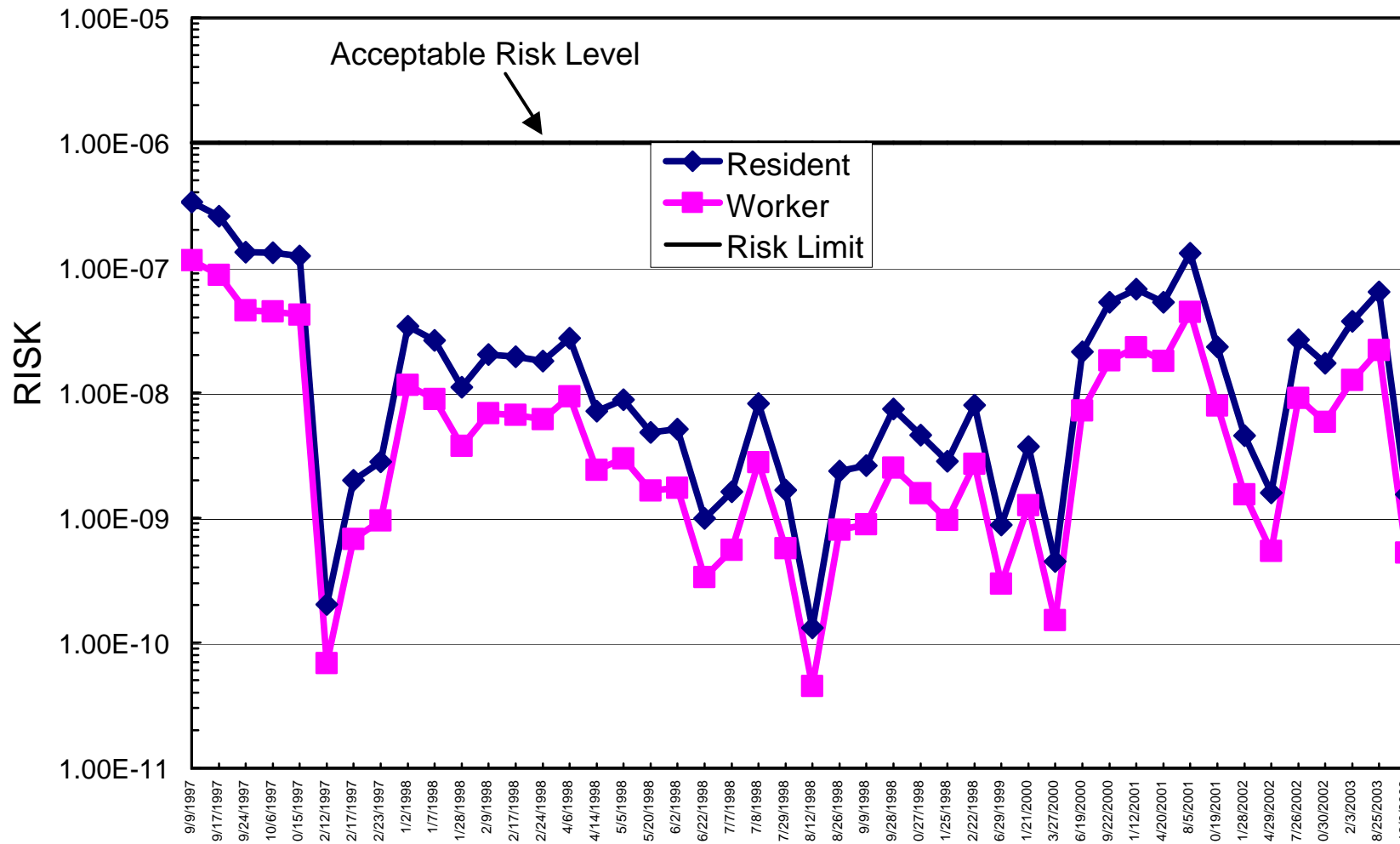
cc: Ms. Stacey Ebner, South Coast Air Quality Management District

**FIGURE 1 - DAILY VOC EMISSIONS**  
**LOCKHEED B-1 VES**  
**Independent Monitoring Data**



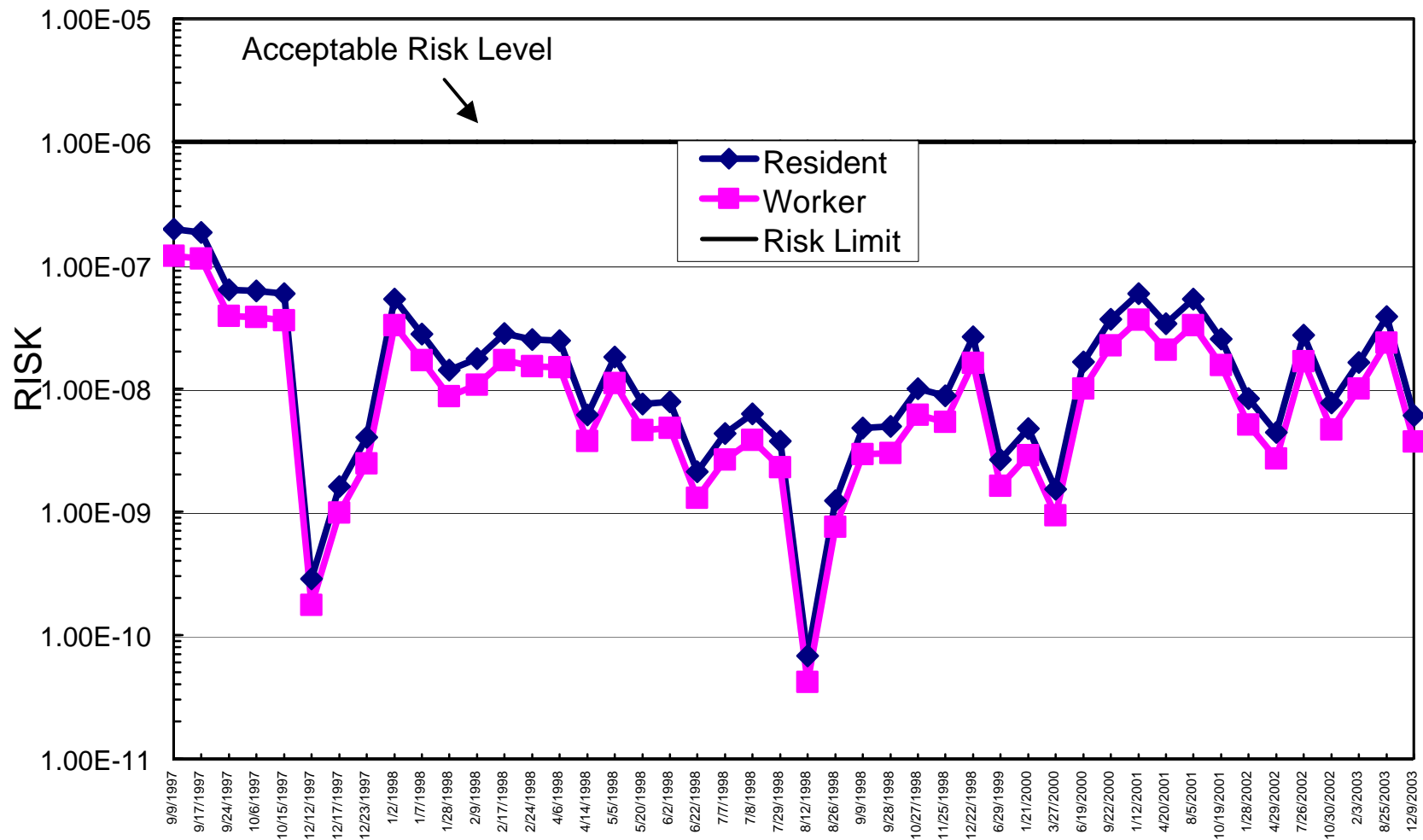
**FIGURE 1**

**FIGURE 2 - HUMAN HEALTH RISK**  
**LOCKHEED B-1 VES**  
**SCAQMD RULE 1401 CHEMICALS**  
**HYPOTHETICAL 70 YEAR LIFETIME**



**FIGURE 2**

**FIGURE 3 - HUMAN HEALTH RISK  
LOCKHEED B-1 VES  
DURING 8.5 YEAR OPERATING PERIOD**



**FIGURE 3**





AN ENVIRONMENTAL ANALYTICAL LABORATORY

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This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

**180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630**

**(916) 985-1000 .FAX (916) 985-1020**

**Hours 8:00 A.M to 6:00 P.M. Pacific**

**E-mail to:samlereceiving@airtoxics.com**



AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0308544

### Work Order Summary

<b>CLIENT:</b>	Mr. Bill Gendron Clayton Group Services 1565 MacArthur Blvd. Costa Mesa, CA 92626	<b>BILL TO:</b>	Mr. Bill Gendron Clayton Group Services 1565 MacArthur Blvd. Costa Mesa, CA 92626
<b>PHONE:</b>	714-431-4100	<b>P.O. #</b>	
<b>FAX:</b>	714-825-0685	<b>PROJECT #</b>	8098191.00 City of Burbank
<b>DATE RECEIVED:</b>	8/27/03	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	9/4/03		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	B-1-VES-082503	Modified TO-15	2.5 "Hg
02A	Lab Blank	Modified TO-15	NA
03A	CCV	Modified TO-15	NA
04A	LCS	Modified TO-15	NA

CERTIFIED BY:

Laboratory Director

DATE: 09/04/03

Certification numbers: AR DEQ, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/03, Expiration date: 06/30/04

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

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(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE**  
**Modified TO-15**  
**Clayton Environmental**  
**Workorder# 0308544**

One 6 Liter Summa Canister sample was received on August 27, 2003. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.5 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
BFB acceptance criteria	CLP protocol	SW-846 protocol
Concentration of IS spike	10 ppbv	25 ppbv when 0.5/2.0 ppbv is used for the reporting limit
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	<= 30% Difference	<= 30% Difference with two allowed out up to <=40%.; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

The daily calibration standard (CCV) analyzed on August 29, 2003 did not meet method required acceptance criteria of 70-130% recovery for 2-Hexanone. Recovery was high and no hit was detected in the associated sample. There was no impact on sample results.

**Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

# AIR TOXICS LTD.

SAMPLE NAME: B-1-VES-082503

ID#: 0308544-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b082914	Date of Collection: 8/25/03
Dil. Factor:	5.84	Date of Analysis: 8/29/03 02:58 PM

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	2.9	15	Not Detected	Not Detected
Freon 114	2.9	21	Not Detected	Not Detected
Vinyl Chloride	2.9	7.6	Not Detected	Not Detected
Bromomethane	2.9	12	Not Detected	Not Detected
Chloroethane	2.9	7.8	Not Detected	Not Detected
Freon 11	2.9	17	Not Detected	Not Detected
1,1-Dichloroethene	2.9	12	13	54
Freon 113	2.9	23	14	110
Methylene Chloride	2.9	10	Not Detected	Not Detected
1,1-Dichloroethane	2.9	12	Not Detected	Not Detected
cis-1,2-Dichloroethene	2.9	12	3.5	14
Chloroform	2.9	14	3.4	17
1,1,1-Trichloroethane	2.9	16	5.5	31
Carbon Tetrachloride	2.9	19	Not Detected	Not Detected
Benzene	2.9	9.5	Not Detected	Not Detected
1,2-Dichloroethane	2.9	12	Not Detected	Not Detected
Trichloroethene	2.9	16	750	4100
1,2-Dichloropropane	2.9	14	Not Detected	Not Detected
cis-1,3-Dichloropropene	2.9	13	Not Detected	Not Detected
Toluene	2.9	11	5.0	19
trans-1,3-Dichloropropene	2.9	13	Not Detected	Not Detected
1,1,2-Trichloroethane	2.9	16	Not Detected	Not Detected
Tetrachloroethene	2.9	20	740	5100
1,2-Dibromoethane (EDB)	2.9	23	Not Detected	Not Detected
Chlorobenzene	2.9	14	Not Detected	Not Detected
Ethyl Benzene	2.9	13	Not Detected	Not Detected
m,p-Xylene	2.9	13	Not Detected	Not Detected
o-Xylene	2.9	13	Not Detected	Not Detected
Styrene	2.9	13	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	2.9	20	Not Detected	Not Detected
1,3,5-Trimethylbenzene	2.9	14	Not Detected	Not Detected
1,2,4-Trimethylbenzene	2.9	14	Not Detected	Not Detected
1,3-Dichlorobenzene	2.9	18	Not Detected	Not Detected
1,4-Dichlorobenzene	2.9	18	Not Detected	Not Detected
alpha-Chlorotoluene	2.9	15	Not Detected	Not Detected
1,2-Dichlorobenzene	2.9	18	Not Detected	Not Detected
1,3-Butadiene	2.9	6.6	Not Detected	Not Detected
Hexane	2.9	10	Not Detected	Not Detected
Cyclohexane	2.9	10	Not Detected	Not Detected
Heptane	2.9	12	Not Detected	Not Detected
Bromodichloromethane	2.9	20	Not Detected	Not Detected
Dibromochloromethane	2.9	25	Not Detected	Not Detected

# AIR TOXICS LTD.

SAMPLE NAME: B-1-VES-082503

ID#: 0308544-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b082914	Date of Collection: 8/25/03
Dil. Factor:	5.84	Date of Analysis: 8/29/03 02:58 PM

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Cumene	2.9	14	Not Detected	Not Detected
Propylbenzene	2.9	14	Not Detected	Not Detected
Chloromethane	12	24	Not Detected	Not Detected
1,2,4-Trichlorobenzene	12	88	Not Detected	Not Detected
Hexachlorobutadiene	12	130	Not Detected	Not Detected
Acetone	12	28	Not Detected	Not Detected
Carbon Disulfide	12	37	Not Detected	Not Detected
2-Propanol	12	29	Not Detected	Not Detected
trans-1,2-Dichloroethene	12	47	Not Detected	Not Detected
Vinyl Acetate	12	42	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	12	35	Not Detected	Not Detected
Tetrahydrofuran	12	35	Not Detected	Not Detected
1,4-Dioxane	12	43	Not Detected	Not Detected
4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	12	49	Not Detected	Not Detected
2-Hexanone	12	49	Not Detected	Not Detected
Bromoform	12	120	Not Detected	Not Detected
4-Ethyltoluene	12	58	Not Detected	Not Detected
Ethanol	12	22	Not Detected	Not Detected
Methyl tert-butyl ether	12	43	Not Detected	Not Detected

## Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	88	70-130

# AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0308544-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b082906a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/29/03 10:01 AM

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Freon 12	0.50	2.5	Not Detected	Not Detected
Freon 114	0.50	3.6	Not Detected	Not Detected
Vinyl Chloride	0.50	1.3	Not Detected	Not Detected
Bromomethane	0.50	2.0	Not Detected	Not Detected
Chloroethane	0.50	1.3	Not Detected	Not Detected
Freon 11	0.50	2.8	Not Detected	Not Detected
1,1-Dichloroethene	0.50	2.0	Not Detected	Not Detected
Freon 113	0.50	3.9	Not Detected	Not Detected
Methylene Chloride	0.50	1.8	Not Detected	Not Detected
1,1-Dichloroethane	0.50	2.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.50	2.0	Not Detected	Not Detected
Chloroform	0.50	2.5	Not Detected	Not Detected
1,1,1-Trichloroethane	0.50	2.8	Not Detected	Not Detected
Carbon Tetrachloride	0.50	3.2	Not Detected	Not Detected
Benzene	0.50	1.6	Not Detected	Not Detected
1,2-Dichloroethane	0.50	2.0	Not Detected	Not Detected
Trichloroethene	0.50	2.7	Not Detected	Not Detected
1,2-Dichloropropane	0.50	2.3	Not Detected	Not Detected
cis-1,3-Dichloropropene	0.50	2.3	Not Detected	Not Detected
Toluene	0.50	1.9	Not Detected	Not Detected
trans-1,3-Dichloropropene	0.50	2.3	Not Detected	Not Detected
1,1,2-Trichloroethane	0.50	2.8	Not Detected	Not Detected
Tetrachloroethene	0.50	3.4	Not Detected	Not Detected
1,2-Dibromoethane (EDB)	0.50	3.9	Not Detected	Not Detected
Chlorobenzene	0.50	2.3	Not Detected	Not Detected
Ethyl Benzene	0.50	2.2	Not Detected	Not Detected
m,p-Xylene	0.50	2.2	Not Detected	Not Detected
o-Xylene	0.50	2.2	Not Detected	Not Detected
Styrene	0.50	2.2	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	0.50	3.5	Not Detected	Not Detected
1,3,5-Trimethylbenzene	0.50	2.5	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.50	2.5	Not Detected	Not Detected
1,3-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
alpha-Chlorotoluene	0.50	2.6	Not Detected	Not Detected
1,2-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
1,3-Butadiene	0.50	1.1	Not Detected	Not Detected
Hexane	0.50	1.8	Not Detected	Not Detected
Cyclohexane	0.50	1.7	Not Detected	Not Detected
Heptane	0.50	2.1	Not Detected	Not Detected
Bromodichloromethane	0.50	3.4	Not Detected	Not Detected
Dibromochloromethane	0.50	4.3	Not Detected	Not Detected

# AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0308544-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b082906a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/29/03 10:01 AM

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Cumene	0.50	2.5	Not Detected	Not Detected
Propylbenzene	0.50	2.5	Not Detected	Not Detected
Chloromethane	2.0	4.2	Not Detected	Not Detected
1,2,4-Trichlorobenzene	2.0	15	Not Detected	Not Detected
Hexachlorobutadiene	2.0	22	Not Detected	Not Detected
Acetone	2.0	4.8	Not Detected	Not Detected
Carbon Disulfide	2.0	6.3	Not Detected	Not Detected
2-Propanol	2.0	5.0	Not Detected	Not Detected
trans-1,2-Dichloroethene	2.0	8.0	Not Detected	Not Detected
Vinyl Acetate	2.0	7.2	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	6.0	Not Detected	Not Detected
Tetrahydrofuran	2.0	6.0	Not Detected	Not Detected
1,4-Dioxane	2.0	7.3	Not Detected	Not Detected
4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	2.0	8.3	Not Detected	Not Detected
2-Hexanone	2.0	8.3	Not Detected	Not Detected
Bromoform	2.0	21	Not Detected	Not Detected
4-Ethyltoluene	2.0	10	Not Detected	Not Detected
Ethanol	2.0	3.8	Not Detected	Not Detected
Methyl tert-butyl ether	2.0	7.3	Not Detected	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	85	70-130



# AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0308544-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b082902	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/29/03 07:24 AM

Compound	%Recovery
Freon 12	100
Freon 114	88
Vinyl Chloride	102
Bromomethane	70
Chloroethane	104
Freon 11	100
1,1-Dichloroethene	106
Freon 113	97
Methylene Chloride	101
1,1-Dichloroethane	105
cis-1,2-Dichloroethene	108
Chloroform	102
1,1,1-Trichloroethane	100
Carbon Tetrachloride	102
Benzene	101
1,2-Dichloroethane	108
Trichloroethene	104
1,2-Dichloropropane	108
cis-1,3-Dichloropropene	108
Toluene	102
trans-1,3-Dichloropropene	111
1,1,2-Trichloroethane	114
Tetrachloroethene	111
1,2-Dibromoethane (EDB)	113
Chlorobenzene	107
Ethyl Benzene	106
m,p-Xylene	103
o-Xylene	101
Styrene	100
1,1,2,2-Tetrachloroethane	99
1,3,5-Trimethylbenzene	108
1,2,4-Trimethylbenzene	95
1,3-Dichlorobenzene	91
1,4-Dichlorobenzene	89
alpha-Chlorotoluene	102
1,2-Dichlorobenzene	103
1,3-Butadiene	99
Hexane	106
Cyclohexane	102
Heptane	123
Bromodichloromethane	110
Dibromochloromethane	119

# AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0308544-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b082902	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/29/03 07:24 AM

Compound	%Recovery
Cumene	103
Propylbenzene	103
Chloromethane	96
1,2,4-Trichlorobenzene	106
Hexachlorobutadiene	118
Acetone	111
Carbon Disulfide	98
2-Propanol	108
trans-1,2-Dichloroethene	96
Vinyl Acetate	119
2-Butanone (Methyl Ethyl Ketone)	117
Tetrahydrofuran	102
1,4-Dioxane	101
4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	128
2-Hexanone	140 Q
Bromoform	96
4-Ethyltoluene	93
Ethanol	90
Methyl tert-butyl ether	90

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	89	70-130

# AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0308544-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b082903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/29/03 08:06 AM

Compound	%Recovery
Freon 12	124
Freon 114	111
Vinyl Chloride	124
Bromomethane	86
Chloroethane	134 Q
Freon 11	108
1,1-Dichloroethene	109
Freon 113	104
Methylene Chloride	115
1,1-Dichloroethane	106
cis-1,2-Dichloroethene	119
Chloroform	110
1,1,1-Trichloroethane	107
Carbon Tetrachloride	114
Benzene	118
1,2-Dichloroethane	117
Trichloroethene	116
1,2-Dichloropropane	117
cis-1,3-Dichloropropene	115
Toluene	114
trans-1,3-Dichloropropene	124
1,1,2-Trichloroethane	126
Tetrachloroethene	135
1,2-Dibromoethane (EDB)	114
Chlorobenzene	116
Ethyl Benzene	113
m,p-Xylene	108
o-Xylene	103
Styrene	110
1,1,2,2-Tetrachloroethane	99
1,3,5-Trimethylbenzene	101
1,2,4-Trimethylbenzene	84
1,3-Dichlorobenzene	91
1,4-Dichlorobenzene	84
alpha-Chlorotoluene	118
1,2-Dichlorobenzene	105
1,3-Butadiene	119
Hexane	114
Cyclohexane	106
Heptane	122
Bromodichloromethane	106
Dibromochloromethane	114

# AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0308544-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b082903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/29/03 08:06 AM

Compound	%Recovery
Cumene	113
Propylbenzene	79
Chloromethane	129
1,2,4-Trichlorobenzene	120
Hexachlorobutadiene	126
Acetone	116
Carbon Disulfide	107
2-Propanol	121
trans-1,2-Dichloroethene	111
Vinyl Acetate	127
2-Butanone (Methyl Ethyl Ketone)	124
Tetrahydrofuran	113
1,4-Dioxane	112
4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	126
2-Hexanone	134 Q
Bromoform	71
4-Ethyltoluene	111
Ethanol	111
Methyl tert-butyl ether	99

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	86	70-130



## CHAIN-OF-CUSTODY RECORD

### Sample Transportation Notice

Rednequish signature on this document indicates that samples being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquish signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action of any kind, relative to the collection, handling, or shipping of samples. J.O.T. Hotline (800) 467-4972.

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(916) 985-1000 FAX: (916) 985-1020

Page 1 of 1

<p>Contact Person <u>Justin</u> <u>Madison</u></p> <p>Company <u>CLAYTON</u> <u>GROUND SERVICES</u></p> <p>Address <u>1565 MacArthur City</u> <u>Osage</u> <u>Missouri</u> <u>State</u> <u>CA</u> Zip <u>92262</u></p> <p>Phone <u>714 431 4100</u> FAX <u>714 825 0605</u></p> <p>Collected By: Signature <u>[Signature]</u> <u>Bill Madison</u></p>	<p>Project Info:</p> <p>P.O. # _____</p> <p>Project # <u>8098191.00</u></p> <p>Project Name <u>CITY OF</u> <u>BRIDGE</u></p>	<p>Turn Around Time:</p> <p><input checked="" type="checkbox"/> Normal</p> <p><input type="checkbox"/> Rush _____</p> <p>Specify _____</p>
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[illegible]

Petitioner's Signature	Date/TIME	Received By (Signature)	Date/TIME	Notes:
<i>[Signature]</i>	8-25-03 / 1130			
Witnesses By (Signature)	Date/TIME	Received By (Signature)	Date/TIME	
Filed Justified By (Signature)	Date/TIME	Received By (Signature)	Date/TIME	
Shipper Name	Air Bill #	Opened By	Condition	Custody Seals Intact?
FedEx	840709536	EAH	Good	Yes No None
Lab Use Only	740			
				Work Order #
				0308544